

**Abstract****Piezoceramic multilayer actuators and a process for their manufacture**

5 During operation, large tensile stresses act on the  
insulating region under the base metallisation with  
external electrodes on piezoceramic multilayer  
actuators. Since this insulating region forms a  
homogeneous unit together with the base metallisation  
10 and the interconnecting layer, this fails when the  
tensile strength of the weakest element is exceeded and  
cracks develop. The cracks running unchecked through the  
insulating region are very critical, since they reduce  
the insulation distance and seriously increase the  
15 probability of actuator failure due to flashovers.

According to the invention it is therefore proposed  
that, in the inactive region (14), the surface (10) of  
the multilayer actuator (1) has a pattern (18) that is  
20 produced by erosions (19) interrupting the surface (10),  
and that the base metallisation (11) is deposited  
exclusively on the surface (10) left by the pattern  
(18).

25 (Figure 3)

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